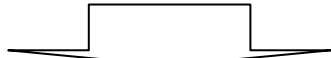


ISSUE: **Riparian encroachment into flood plain and channels resulting in loss of flood capacity and eventual needs for removal of riparian habitat and wildlife. Objective – Zero Channel Discharge and maximum use of riparian/wetlands areas**

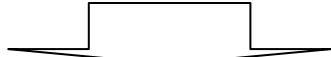
Background:

Downstream riparian planning and operations are required to avoid hydrological effects of persistent low flows from the WWTP. Low discharge flows can have longer term, physical/biotic effects due to:

Highly seasonal rainfall and runoff and flood flows (Dec.15-Feb. 15)



Long growing seasons (March 15 – Nov.15)



Riparian Habitat – water dependent trees and shrubs – willows, cottonwoods, and sycamores



Dry season low floods maintaining groundwater within the root zone of young trees and shrubs



Development

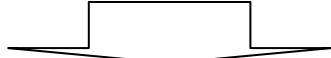
Upstream flood control measures reducing velocities/scour of 1 / 2-1/25 year runoff events

Upstream facilities incapable of reducing 25-100 year runoff events

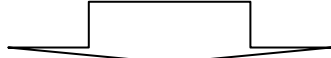
Discharges from control measures, agricultural returns, and treatment facilities maintaining persistent low flow in shallow channels and recharging local groundwater tables within the root zones of riparian trees/shrubs



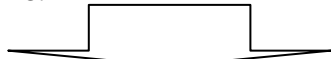
Root migration and vegetation growth (encroachment) along banks and into braided channels



Bank and channel stabilization and sediment entrapment with reduction of channel capacity



Diversion of event channel flows into unstablized areas, lateral bank erosion, and overbank flows (flooding),



Generalized, uncoordinated riparian removal by authorities or individual bank side owners

Request:

All “discharges” during the first five years of operations shall be directed to recharge (not non-compliant holding) basins, above the banks of the existing braided channel system (areas set-aside for Phase 2 and 3 facilities).

Plant Site and Santa Clara River with two potential riparian recharge areas,
Lengths: East/Left = 3000ft; West/Left =>2000ft depending on Ventura County within overall site plot limits which would be maintained in open space zoning.



Discharges should be done first to the east of the plant and secondarily to west; the current discharge point or discharges to the west may encourage encroachment by the riparian habitat at the Los Angeles/Ventura County and further constriction of the channel where the north/south ridges approach the channel.

Treated effluent may be discharged along the northerly edge of the riparian areas channel-ward of the old road/bank either by pipe or open channel and would provide an equivalent to overland polishing of effluent.